

Long-term effectiveness and mediators of a need-supportive physical activity coaching among Flemish sedentary employees

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Research aim

This study tested the long-term and mediation effects of a need-supportive coaching program on physical activity.

Procedures

Sedentary employees of the K.U.Leuven ($n = 92$; mean age = 41.3 ± 13.6 years; 52.0% women) received four months of physical activity coaching by coaches who were recently graduated with a bachelor's degree and currently specializing in health-related physical activity ($n = 30$). The coaching program was limited to five individual contact moments, either face-to-face, by phone or by e-mail. The coach advanced behavioural change by coaching according to the principles of **motivational interviewing** and the **self-determination theory**, i.e. by focusing on satisfying the three basic needs:

- **Autonomy**, e.g. by exploring options and facilitating rather than prescribing physical activities
- **Competence**, e.g. by appropriate goal-setting and providing positive feedback
- **Relatedness**, e.g. by expressing empathy and avoiding criticism

The **coaching group** ($n = 92$) and a **control group** ($n = 34$) completed measurements before the intervention (i.e., pre), after the intervention (i.e., post) and one year after pre-tests (i.e., follow-up).

Measurements

- Physical activity: Godin Leisure-Time Exercise (GLTE) Questionnaire
- Self-efficacy
- Social support
- Autonomous motivation



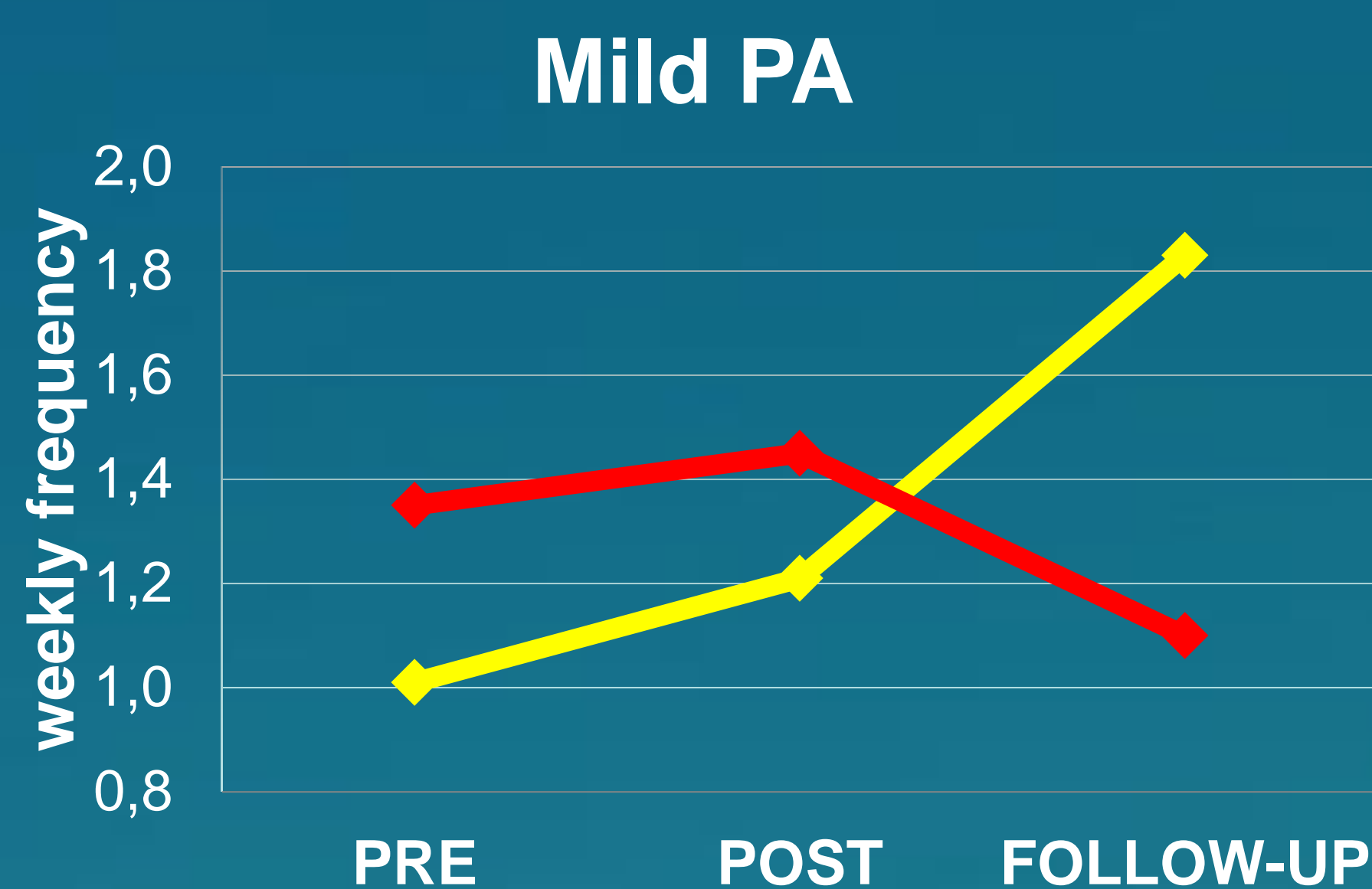
* $p < .05$; ** $p < .01$; *** $p < .001$

Contact Information

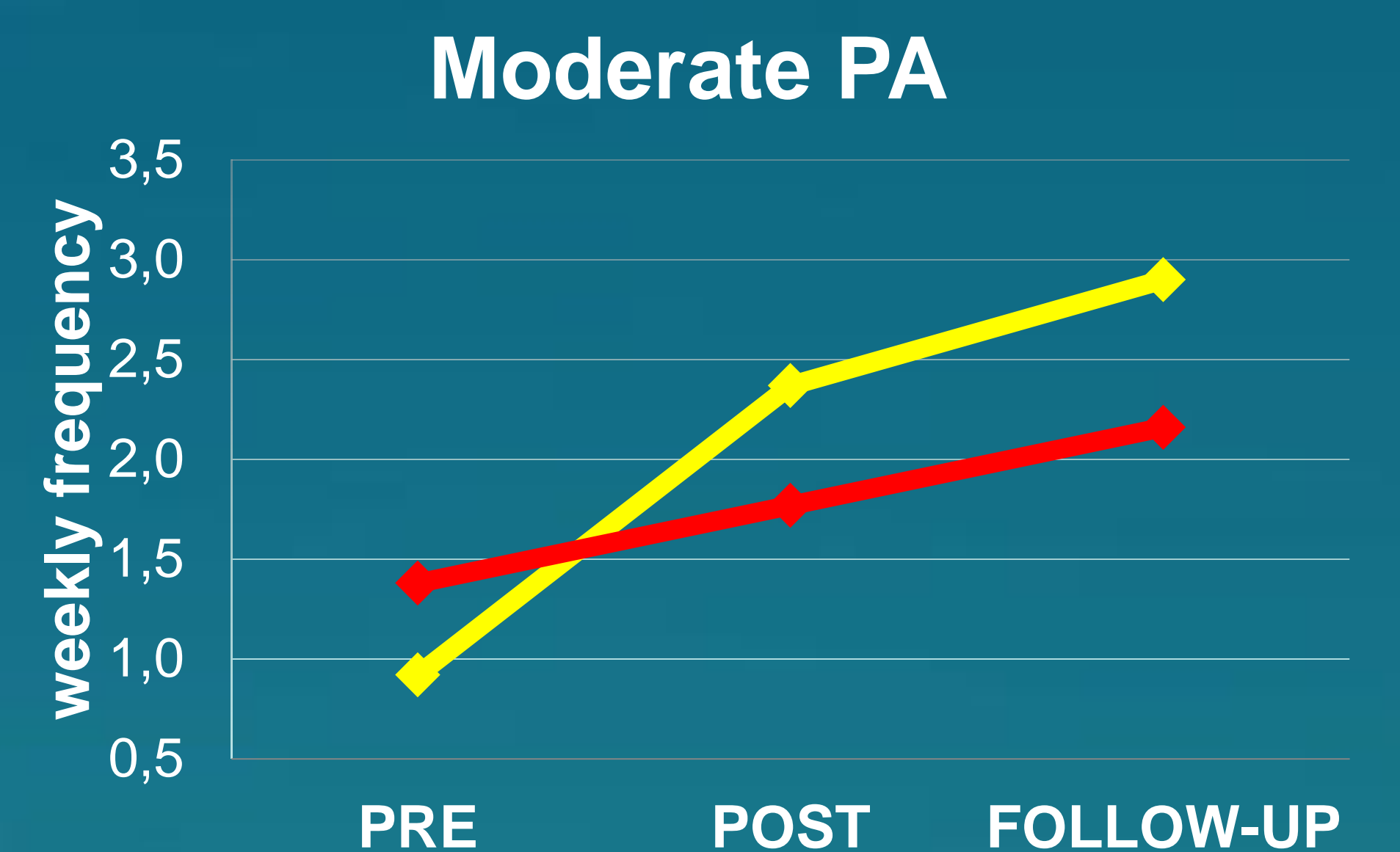
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Results

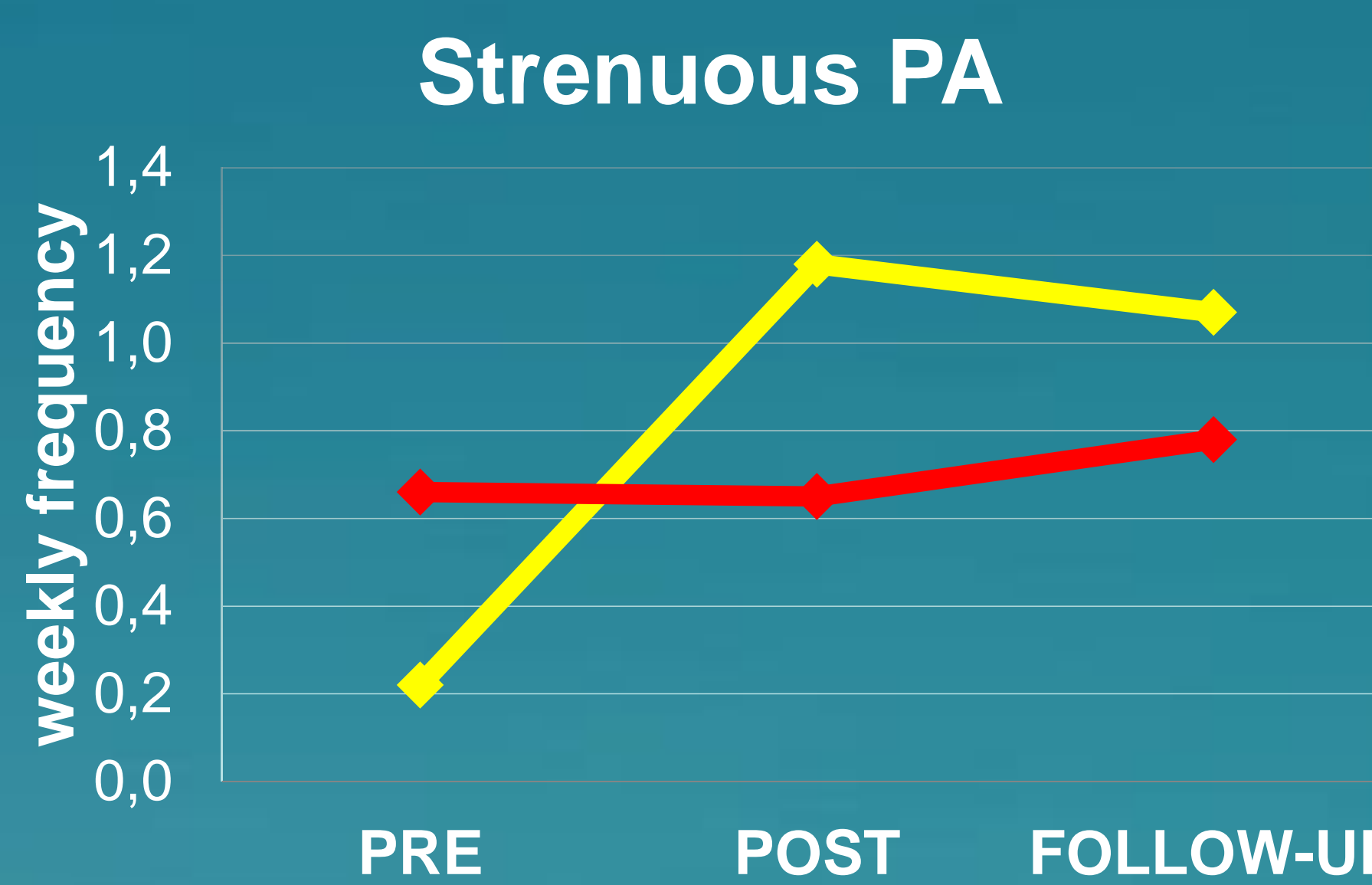
Effects



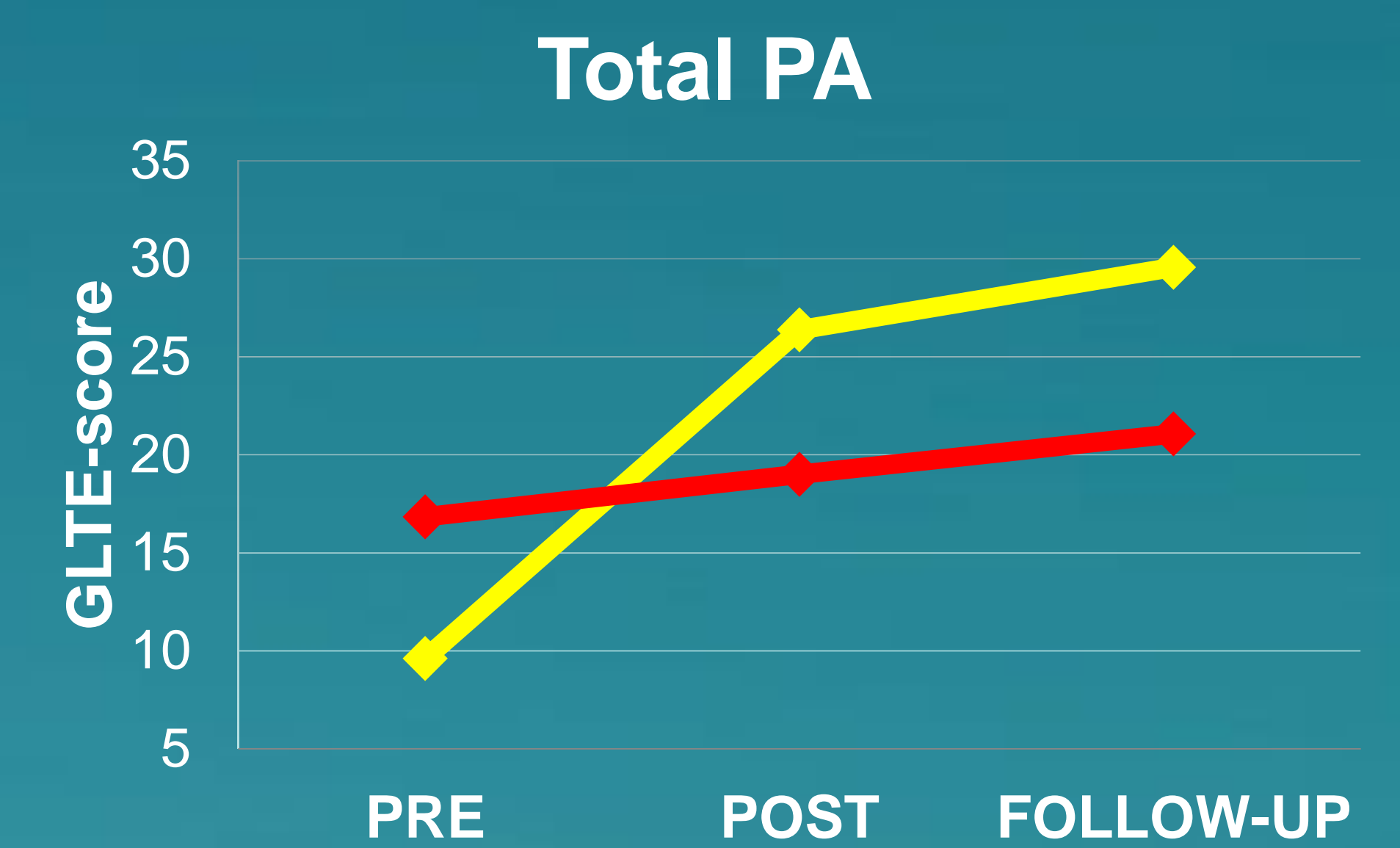
*** TIME from pre to follow-up in **COACH**



* 2 (time) x 2 (group) from pre to post
*** TIME from pre to post & follow-up in **COACH**



** 3 (time) x 2 (group)
*** 2 (time) x 2 (group) from pre to post
* 2 (time) x 2 (group) from pre to follow-up
*** TIME from pre to post & follow-up in **COACH**



*** 3 (time) x 2 (group)
*** 2 (time) x 2 (group) from pre to post
** 2 (time) x 2 (group) from pre to follow-up
*** TIME from pre to post & follow-up in **COACH**

Mediations (by bootstrapping macro of Preacher & Hayes, 2008)

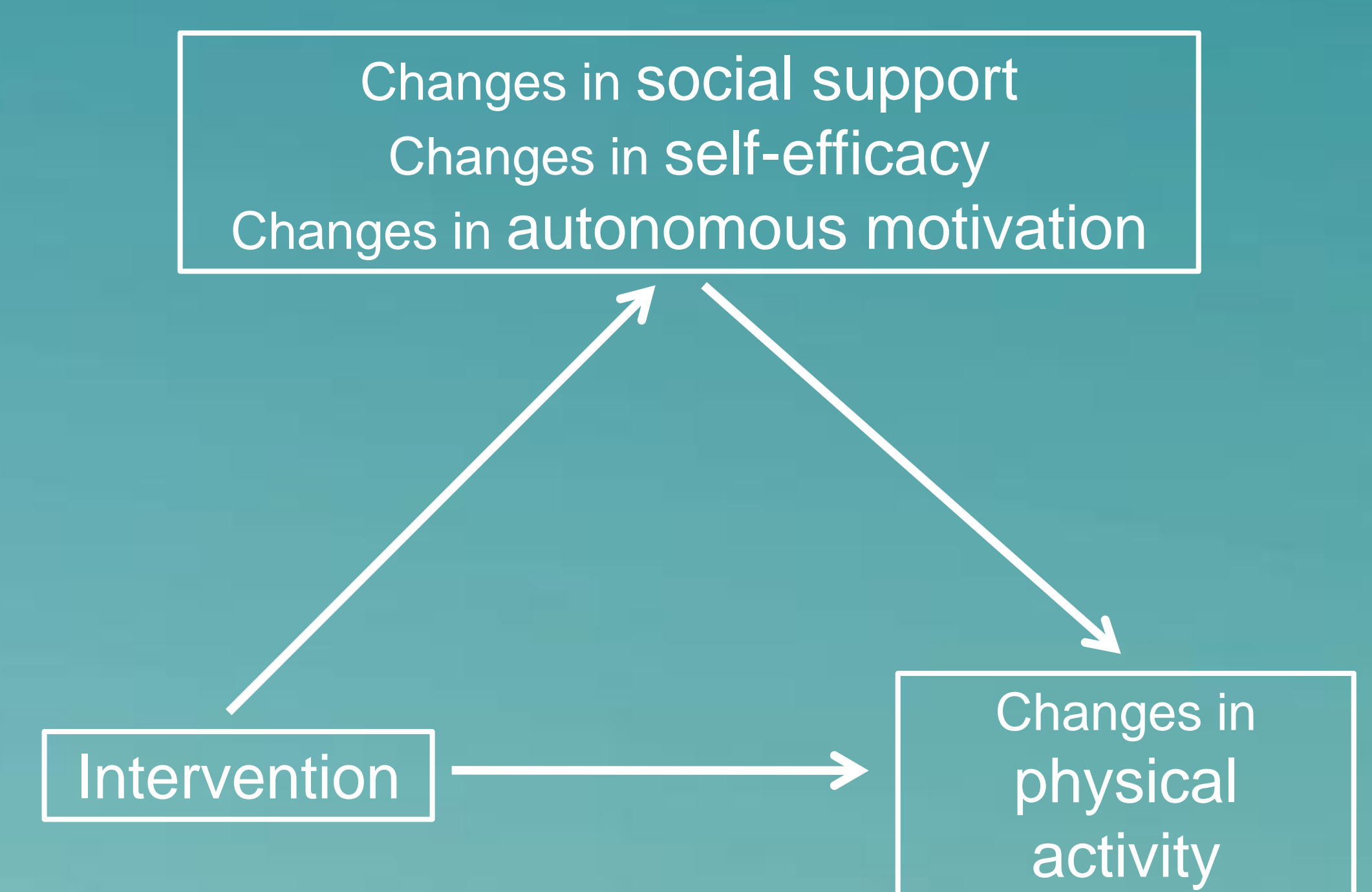
From pre to post

- **Strenuous PA:**
mediated by self-efficacy & autonomous motivation
 $R^2 = .192$, $F = 6.780$ ***

- **Total PA:**
mediated by self-efficacy
 $R^2 = .214$, $F = 7.775$ ***

From pre to follow-up

- **Strenuous PA:**
 $R^2 = .190$, $F = 5.968$ ***
- **Total PA:**
mediated by social support
 $R^2 = .165$, $F = 5.024$ **



Conclusions

- This study provides evidence for the **(long-term) effectiveness** of a need-supportive physical activity program, consisting of a limited number of contact moments, and suggests its potential as an **efficient** health initiative at **community level**.
- Effects were found mainly in **(moderate and) strenuous physical activity**, suggesting that (1) coaches mainly encouraged the participants to incorporate higher intensity physical activities in their individualized program, and (2) mainly higher intensity (i.e. purposeful and structured) physical activities were experienced as self-determined.
- The study emphasized the importance of self-efficacy, autonomous motivation and social support as **mediators** within a physical activity intervention based on the self-determination theory.